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DISPLAY FRAME PACKING METHOD

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[There are no amendments to this patent.]

Claim

A display frame packing method, characterized by the fact that a display frame consisting of a head, which is held by a holding lead in a hollow part of a frame and protrudes from a plane including said frame, and multiple leads protruding from the above-mentioned frame toward the side surface of said head are laminated, via a frame-shaped dummy frame approximately equal in size to said display frame, to each of several prescribed sheets.

## Detailed explanation of the invention

### Technical field of the invention

The present invention pertains to a display frame packing method.

### Technical background of the invention

As a frame constituting a semiconductor, a so-called display frame 10 as shown in Figure 1 is used. The display frame 10 has a head 2, in which a semiconductor device is mounted in a hollow part of a frame 1 made of a metal such as steel. The head 2 is held by a holding lead 3 protruding from the frame 1. The head 2 is held in a state in which it protrudes to the outside from a plane including the frame 1. On the inner surface of the frame 1, multiple inner leads 4 protrude toward the side surface of the head 2.

Next, 50-100 sheets of display frames 10, as shown in Figure 2, are superposed and packed, and a packed frame 5 is housed in housing box, etc., and packed.

### Problems to be solved by the invention

The above-mentioned conventional display frame packing method has the following drawbacks.

(1) Since a prescribed amount of part of the head 2 protrudes from the plane including the frame 1, if many sheets of display frames 10 are superposed, the head 2 contacts them, such that the amount of protrusion is increased.

(2) Since the display frames 10 are laminated in a state in which the heads 2 protrude, deformation of the frame 1 is likely.

(3) The frame 1 and the head 2 are deformed after laminating with the superposing method due to the handling method during transport, and sometimes, a display frame cannot be used.

### Objective of the invention

The objective of the present invention is to provide a display frame packing method that prevents the deformation of a frame and change in the amount of protrusion of a head part during packing.

### Outline of the invention

The present invention pertains to a display frame packing method that prevents the deformation of a frame and change in the amount of protrusion of a head part during packing by interposing dummy frames for each lamination of a prescribed number of display frames.

### Application example of the invention

Next, an application example of the present invention will be explained with reference to the figures.

Several sheets of so-called display frames 10 are prepared, in which part of a head 2 protrudes from a plane including a frame 1 as shown in Figure 1. Next, as shown in Figure 3, a prescribed number of sheets of display frames 10 are laminated. A dummy frame 12 is laminated on a laminate 11 of a prescribed number of sheets of display frames 10. A laminate 11 consisting of several sheets of display frames 10 similar to the above-mentioned laminate 11 is then laminated on the dummy frame 12. Similarly, the laminate 11 of display frames 10 and the dummy frame 12 are sequentially laminated in an alternate fashion. Housing in a prescribed box, etc., completes the packing.

Here, the number of sheets of display frames 10 constituting the laminate 11 is preferably set at about 5-10 sheets. The dummy frame 12, as shown in Figure 4, has a shape approximately equal to the shape of the frame 1 of the display frame 10, separates the upper and lower display frames 10 between the laminates 11 by its thickness, and functions to prevent mutual contact of the heads 2 and 2. Dummy frame 12 is a frame-shaped body so that it can preferably effectively prevent unnecessary contact of the head 2 and the inner lead 4 to prevent contamination. As the material of the dummy frame 12, a soft metal similar to the material of the display frame 10, such as copper, is preferably used.

As mentioned above, according to the method for packing a display frame, since a prescribed number of sheets of the display frames 10 is set to the degree that the lamination number is not increased, the display frame is adjacent to the next display frame 10 via the dummy frame 12, so that the deformation of the frame 1 due to the contact of the head 2 can be prevented. In addition, since the protruded part of the head 2 for each display frame 10 can be constantly maintained, deformation of the head 2 can be prevented.

As explained above, according to the display frame packing method of the present invention, deformation of the frame and change in the amount of protrusion of the head part during packing can be prevented.

### Brief description of the figures

Figure 1 is a plan view showing a display frame. Figure 2 is an oblique view showing display frames packed by a conventional method. Figure 3 is an oblique view showing display frames packed by the method of the present invention. Figure 4 is a plan view showing a dummy frame.

- 1      Frame
- 2      Head

- 3 Holding lead
- 4 Inner lead
- 5 Frame
- 10 Display frame
- 11 Laminate
- 12 Dummy frame

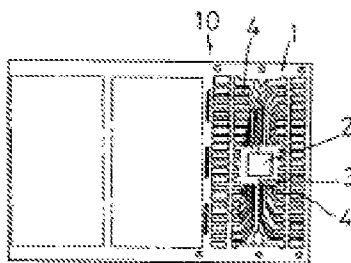


Figure 1

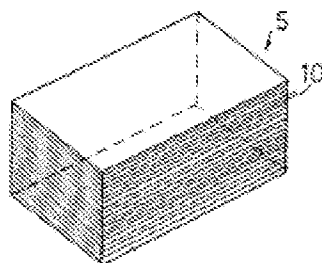


Figure 2

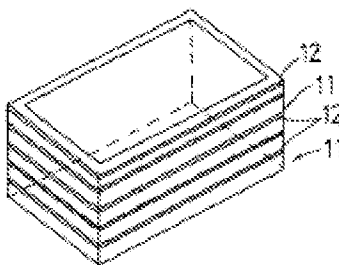


Figure 3

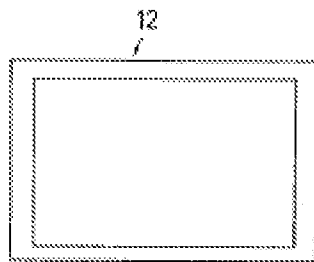


Figure 4